STATE OF CALIFORNIA

ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of: Exploring Revisions to Current Interconnection Rules Between Investor-Owned and Publicly-Owned Utility Distribution Companies and Distributed Generators Evaluating CEQA Procedures for Siting Distributed Generation Facilities	)	Docket No. 99-DIST-GEN-(2) January 16, 2002

SOUTHERN CALIFORNIA EDISON'S RESPONSE TO QUESTIONS FOR THE SITING COMMITTEE WORKSHOP ON DEVELOPING A STRATEGIC PLAN FOR DISTRIBUTED GENERATION

MEGAN SCOTT-KAKURES
MICHAEL D. MONTOYA

Attorneys for
SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
Telephone: (626) 302-6057
Facsimile: (626) 302-2050
E-mail: Mike.Montoya@SCE.com

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Executive Summary

In 1999, the California Public Utilities Commission (CPUC) instituted a rulemaking, R.99-10-025, to "develop specific policies and rules to facilitate the deployment of distributed generation and DER in California."[1] As a result of R.99-10-025, the CPUC adopted standardized interconnection procedures and standards for all distributed generators wanting to interconnect with California utilities and policies for the implementation of interim standby rates for distributed generation. The CPUC also identified the following significant issues that it planned to address in R.99-10-025:

- Ownership and control of distributed generation;

[1] R.99-10-025, page 1.

- Role of the UDCs in distributed generation;
- Impacts distributed generation and DER may have on the environment and on distribution system reliability; and
- Rate design and cost allocation issues.[2]

SCE recommends that the Siting Committee allow the CPUC to conclude its efforts in R.99-10-025 before developing goals that would predetermine the value and applications for DG before all necessary analysis and fact finding have been completed.

However, if the Siting Committee moves forward with developing a Strategic Plan at this time, its purpose should be to evaluate and assess the various distributed generation technologies in order to provide policymakers with objective information for use in developing energy policies. The purpose statement might include the following objective: "To research and evaluate distributed generation technologies including such characteristics as environmental cleanliness, efficiency, reliability, and cost and contrast these characteristics to those of new central station power plants."

Over the next several years, advancements in technology are expected to result in continually less expensive and more efficient small generating machines. Given these anticipated advancements, DG has the potential for an increased contribution to the electric industry both as a competitive generation resource for customers and as an on-grid technology option for utilities. SCE supports the market development of DG based on the following principles:

- Tangible value to end-use consumer, without adversely affecting non-participants;
- Safe and reliable integration with the utility grid;

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[2] *Ibid*, page 4.

- Environmental preservation;
- Consumer protection;
- Fair recovery of authorized utility investments and costs; and
- A fair competitive generation market (*i.e.*, no segment of the competitive generation market should be unfairly advantaged or disadvantaged over other segments).

SCE respectfully submits the following responses to Questions for the Siting Committee Workshop on Developing a Strategic Plan for Distributed Generation.

I. Scope of the Energy Commission Strategic Planning Effort

Question I.1.

What should be the purpose of this Strategic Plan? Possible purpose statements include the following:

- To promote distributed generation. If so, to whom?
- To coordinate distributed generation activities among State agencies and organizations.
- To promote ways for distributed generation to be deployed that have a positive impact on air quality
- To promote the development and application of clean, efficiency, reliable and affordable distributed generation technologies.
- To define the preferred role of distributed generation in California.
- To declare where distributed generation should be sited as an alternative to new transmission lines or where utilities or developers are precluded from building transmission lines or central station generation.

Response I.1.

The purpose of a Strategic Plan for Distributed Generation should be to evaluate and assess distributed generation (DG) technologies. The Siting Committee should neither advocate nor promote DG. Its role should not be to either

encourage or discourage the deployment of DG, but rather to be an information repository from which state policymakers may access information for use in developing energy policies.

If the Siting Committee moves forward with developing a Strategic Plan at this time, the purpose statement might include the following objective: "To research and evaluate distributed generation technologies including such characteristics as environmental cleanliness, efficiency, reliability, and cost and contrast these characteristics to those of new central station power plants." This objective:

- Recognizes that the first step in developing a DG policy is to objectively evaluate the merits and shortcomings of each of the various technologies and compare them to those of the alternatives, new combined cycle central station power plants. Without such a comparison, public policy related to distributed generation cannot be responsibly established.
- Recognizes that appropriate applications of DG will be based on results of such evaluation; and
- Incorporates the notion from Senate Bill 1298 that DG should have a positive impact on air quality.

The Strategic Plan should not include as its purpose implementation issues such as "to declare where distributed generation should be sited as an alternative to new transmission lines or where utilities or developers are precluded from building transmission lines or central station generation" because such a purpose predetermines the value and applications for DG before all necessary analysis and fact finding has been completed.

Question I.2.

What technologies should be included within the scope of the Strategic Plan?

Response I.2.

The Siting Committee should fairly evaluate all DG technologies that are currently commercially available.

II. Vision, Mission, and Goals of an Energy Commission Strategic Plan

Question II.1

What should be the Energy Commission's vision or "desired future state" for distributed generation? Possible vision statements may include but are be [sic] limited to the following:

- DG will become a viable substitute for central station power plants and high-voltage transmission lines.
- Some level of on-site generation will be installed in all buildings, or alternatively, in all new buildings.
- Microgrids will play an important role in meeting the needs of electricity consumers.
- Using a combination of distributed generation, energy efficiency measures, and net metering, buildings will produce as much electricity as they use (so called "zero-net" electricity buildings).
- Energy users will be able to meet their energy needs by choosing among a range of distributed generation alternatives and grid power.
- Distributed generation will become an integral component of a highly reliable, efficient, secure, economic and clean energy supply system.

Response II.1

In general, the Siting Committee should not establish goals for the use and implementation of DG before it completes its fact finding and evaluation.

Specifically, from a policy perspective, it is not appropriate for the CEC to mandate goals for DG or "microgrid" penetration, because such goals undermine the basic premise of competition—that the individual actions of market participants are

the best means for reaching efficient market outcomes. Goal statements such as "DG will become a viable substitute for central station power plants and high-voltage transmission lines" or "using a combination of distributed generation, energy efficiency measure, and net metering, buildings will produce as much electricity as they use" are inappropriate. DG should be allowed to develop based on electricity consumer's choice, subject to regulatory intervention, as necessary, to correct market failures.

The CEC should also recognize and evaluate the impact of any proposed deployment plan for gas-fired distributed generation on gas supply and pricing in California. Large scale deployment of gas-fired distributed generation that is significantly less efficient than combined cycle central station power plants will shift generation to less efficient sources and increase the amount of gas used in California which, in turn, has the potential to increase gas prices.

The CEC should be guided by the following principles in developing its vision or desired future-state for distributed generation:

- Tangible value to end-use consumer, without adversely affecting non-participants;
- Safe and reliable integration with the utility grid;
- Environmental preservation;
- Consumer protection;
- Fair recovery of authorized utility investments and costs; and
- A fair competitive generation market (i.e., no segment of the competitive generation market should be unfairly advantaged or disadvantaged over other segments).

SCE proposes the following modification to the sixth proposed bullet as a possible vision statement to reflect the CEC's vision or desired future-state for DG: "Distributed generation will be evaluated among the many components of a highly

reliable, efficient, secure, economic and environmentally responsible energy supply system."

Question II.2.

Are the missions, goals, and objectives outlined by the U.S. Department of Energy (DOE) in its Distributed Energy Resources (DER) Strategic Plan consistent with the State's efforts to deploy distributed generation? (See Appendix A for more information.)

Response II.2.

SCE is concerned that the DOE has concluded that the use of DG is the best way to achieve its objective of having "the cleanest, most efficient and reliable energy system" prior to completing an objective evaluation of the various DG technologies and associated issues. As previously discussed, it is imperative that the CEC accurately and fairly evaluate all distributed generation technologies before concluding that DG is the "best" way to achieve the state's energy goals or before determining that DG should play a prominent role in formulating the state's energy goals. The CEC needs to understand and be able to project the implications that market-driven DG is likely to have on reliability, price (including price variation risk), and environmental impact of the electricity supply on which California relies.

SCE is currently conducting research in this area and is an advocate of participating in these types of evaluations.

Question II.3.

Comment on the suitability for California of the DOE's goal to achieve 20 percent of new electricity capacity additions from distributed generation.

Response II.3.

It is inappropriate to mandate penetration attainment goals for DG before completing a full-scale, objective evaluation of the various DG technologies

including, but not limited to, such characteristics as efficiency, emissions and environmental impacts, costs, and reliability.

III. Barriers to Deployment of Distributed Generation

Question III.1.

Please comment on the major regulatory, institutional, market, or business development barriers currently impacting distributed generation deployment.

Response III.1.

In most cases the major barriers to distributed generation deployment are the characteristics of the technologies themselves. Under normal circumstances with no distortions in utility rates, the high installed costs and poor efficiencies of many distributed generation technologies make them unattractive to customers. In addition, the emissions characteristics and required control devices can represent another challenge when installing fossil-fired distributed generation technologies. In order for distributed generation technologies to be deployed in significant volume, they must be competitive from a cost and performance perspective and must not rely on government incentives or distortions in utility rates to justify their installation.

Question III.2.

Characterize the issue or barrier into a concise problem statement. What activities are underway or should be initiated to mitigate the barrier? Who has the primary authority to address the identified barrier?

Response III.2.

The State initially began its investigation of distributed generation as a joint effort among the CPUC, the CEC, and the Electricity Oversight Board. In D.99-10-025, the CPUC elected to continue the investigation through workshops and testimony. Specific issues were identified and the respective agencies were authorized to conduct due diligence and make recommendations. Prior to moving

forward with a new Strategic Plan for Distributed Generation, the Siting Committee should allow the appropriate agency to resolve any remaining open issues. It is important that time not be wasted through duplication of work efforts or evaluating issues in the wrong forum.

Furthermore, research is needed to evaluate the development and application of distributed generation technologies including such characteristics as environmental cleanliness, efficiency, reliability, and cost.

Question III.3.

What is preventing distributed generation from being installed at sites which support State energy policy objectives, including to improve the reliability and security of the California's energy supplies and to improve electric-generation fuel efficiency and diversity?

Response III.3.

Distributed generation is a group of small-scale generation technologies that have not been fully evaluated. Currently, DG technologies are experiencing the best economic conditions since the early 1980s (i.e., high electric rates and low gas prices, state incentives under AB970, tax exemptions, and waiver of standby charges under SB X1 28). However, even under these conditions, many projects are still not attractive because of high capital costs or high operation and maintenance costs. Without the required technology evaluations and comparison to other state-of-the-art alternatives, it is premature to conclude that deployment of DG will support State energy policy objectives.

IV. Policies to Develop for the Strategic Plan

Question IV.1.

What policy issues should the Energy Commission consider in developing its Strategic Plan?

Response IV.1.

The Energy Commission should first issue a definitive statement of the State's energy goals and then develop a plan that supports the State's goals. Only after completing an objective evaluation of DG should the Energy Commission make the determination of what role, if any, DG should play in that plan.

Question IV.2.

Are there important policy decisions or gaps that should be considered or reconsidered in light of the range of energy crisis activities conducted during the past two years?

Response IV.2.

In R.99-10-025, the Commission ordered workshops regarding interconnection issues, streamlining the California Environmental Quality Act (CEQA) and permitting process for distributed generation, and how distributed generation can be incorporated in the utility's planning process. The CPUC also identified the following significant issues that it planned to address in R.99-10-025:

- Ownership and control of distributed generation;
- Role of the UDCs in distributed generation;
- Impacts distributed generation and DER may have on the environment and on distribution system reliability; and
- Rate design and cost allocation issues.

The agency assigned to the respective issues should be allowed to complete the work R.99-10-025 initiated before the Siting Committee determines if there are remaining issues that need to be resolved.

Question IV.3.

Should the microgrid concept be endorsed as a matter of public policy? What steps must be taken to increase the development of microgrids in California? What impact will this endorsement have on utility operations (grid management, etc.).

Response IV.3.

Microgrids should not be endorsed as a matter of public policy. The microgrid infrastructure model raises considerable consumer protection issues as well as distribution design and safety concerns. For example, submetered mobile home parks are a form of microgrid that would engender numerous regulatory and landlord-tenant problems if it were not for the statutory limitations that require mobile home park landlords to flow through the tariff price of electricity to their tenants. When a business park installs a DG unit to serve the individual tenants, the DG owner effectively becomes a mini-utility, and the tenants need some form of protection from monopoly abuse. Furthermore, it isn't clear why viewing a DG unit at a microgrid as exclusively serving the local tenants is appropriate. The DG unit is part of the overall electrical grid and is "in" the wholesale market just like a central station plant. If regulators fail to recognize this electrical linkage, inefficient policies and investments are likely to ensue. Before any policy is established regarding the application of microgrids, the CEC should accurately assess the objectives of microgrid installations, benefits to customers, consumer protection issues, regulatory constraints, distribution design issues, and safety issues.

Question IV.4.

Would changing the definition of a public utility help distributed generation deployment in the state? If so, what process would be needed to modify the term?

Response IV.4.

No. Regulation over persons or entities that own and/or operate electric facilities should not be driven by a desire to expand the deployment of distributed generation, but rather by a desire to protect consumers and the general public.

The comments of Commissioner Wood and President Lynch regarding the "Staff Study on Electric Retail Markets and Distribution Services" should be a

reminder of the consequences of instituting wholesale changes without the proper analysis:

> "Over the past ten years the commission has failed to consider or analyze the 'potential adverse consequences…such as consumer harm that may be caused' by dismantling the traditional distribution utility. Instead, the Commission restructured an entire industry on the basis of shaky assumptions and 'policy preferences,' not concrete analysis of the factual circumstances surrounding high electric rates in California…We will not support more deregulation of the electric industry until we understand better the consequences for our state."

Question IV.5.

Should the Building Energy Efficiency Standards (Title 24) be modified to encourage distributed generation installations in new construction and major remodels?

Response IV.5.

No changes to Building Energy Efficiency Standards should be considered to encourage distributed generation because generation technologies and energy efficiency are fundamentally different things. Building Energy Efficiency Standards address how energy is consumed, not how it is generated. Distributed generation technologies should not be mandated by law but, rather, should be installed voluntarily by customers based on the merits of each technology. This policy will help California avoid mandating non-cost-effective or non-environmentally sound generation technologies and creating an even more undesirable business climate than has already been created by the energy crisis.

V. State Agency and Organization Involvement in Distributed Generation

Question V.1.

Which State agencies and organizations are actively involved or considering undertaking some level of distributed generation activity?

Response V.1.

No response.

Question V.2.

What is the primary focus of those activities?

Response V.2.

No response.

Question V.3.

What future activities are being planned with respect to distributed generation?

Response V.3.

No response.

Question V.4.

Is there a need to coordinate distributed generation activities across state agencies? If so, describe how this coordination effort should be accomplished.

Response V.4.

Yes, there is a need to coordinate distributed generation activities across state agencies to avoid duplication of effort and ensure that the various programs are properly monitored. The CEC should not independently embark on a distributed generation policy agenda without coordinating its efforts with those of the CPUC whose distributed generation proceeding has been under way for nearly three years.

VI. Specific Distributed Generation Activities by the Energy Commission

Question VI.1.

What new initiatives could be conducted by the Energy Commission to better integrate distributed generation with the following activities:

- Research, Development and Demonstration Programs
- Renewables Program
- Title 24 Building Energy Efficiency Standards
- Energy Efficiency and Demand-Responsiveness Programs
- Power Plant Licensing Process
- Web Sites
- Outreach to target audiences

Response VI.1.

See Response IV.2.

VII. Procedural Issues

Question VII.1.

What is the best approach to develop a strategic plan in this proceeding?

Response VII.1.

Before moving forward with developing a strategic plan, the Siting Committee should review the status of workshop and testimony issues outlined in R.99-10-025 to determine the next steps or if there are information gaps that need to be filled in or recommendations that need to be considered. In some cases the assigned agency needs to be given time to complete its task. In addition, the CEC should conduct a fair and impartial evaluation of distributed generation technology to determine if and where DG can support State energy policies and goals.

Question VII.2.

Should working groups be formed? If so, how many and how should the work be divided among several working groups?

Response VII.2.

Working groups may be appropriate for some specific tasks.

Question VII.3.

If a working group process cannot provide consensus in the time available, what formal procedures should the Siting Committee employ to provide an opportunity for consideration?

Response VII.3.

Interested parties should be given the opportunity to weigh in on recommendations through written comments if a working group process cannot provide consensus.

Respectfully submitted,

MEGAN SCOTT-KAKURES
MICHAEL D. MONTOYA

By: Michael D. Montoya

Attorneys for
SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
Telephone: (626) 302-6057
Facsimile: (626) 302-2050
E-mail: Mike.Montoya@SCE.com

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